

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: Claim 3 depends on **canceled** claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-6, 23, 30, 32, 33 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Lazarus 1,643,217 (hereinafter Lazarus).

The patent to Lazarus teaches a toothbrush in Fig. 1 comprising a handle a, a **ring-like** head b connected to said handle which is deemed “**in the form** of an open frame ring” (emphasis added; a broad recitation) having a centrally located open area, said head having a longitudinal axis and a cleaning surface, at least one elongated shaft e rotatably mounted to said cleaning surface parallel to said longitudinal axis, said shaft e extending over a major portion of the length of said head, a plurality of cleaning elements c mounted to and extending outwardly from said shaft at said open area, and said cleaning elements being disposed at an angle which is non-perpendicular to said shaft since they are spirally mounted (p. 1, lines 48-56). Note, the **ring-like** head frame

b as shown in Fig. 1 of Lazarus is deemed to meet the broader recitation “**in the form of an open frame ring**” (emphasis added).

As for claim 4, said shaft and said cleaning elements are in the form of a roller (Figs. 1, 3 and 4) having said cleaning elements located continuously (Fig. 1) along the length of said shaft.

As for claim 5, shaft is detachably mounted in bearings secured to said cleaning surface of said head.

As for claim 6, said shaft e is in the form of “a bent wire” spirally wound around itself, and said cleaning elements c being bristles extending through said bent wire.

As for claim 23, said shaft e and said cleaning elements c are in the form of a roller (Figs. 1, 3 and 4) having said cleaning elements disposed continuously along the length of said roller, and said cleaning elements being bristles.

As for claim 30, said toothbrush is a manual toothbrush

As for claim 32, as already stated, Lazarus teaches in Figs. 1-4 a toothbrush comprising a handle a, a ring-like head b connected to said handle, said head having a longitudinal axis and a cleaning surface, at least one elongated shaft e rotatably mounted to said cleaning surface parallel to said longitudinal axis, said shaft extending over a major portion of the length of said head, a plurality of cleaning elements c mounted to and extending outwardly from said shaft, said head being deemed “**in the form of an open frame ring**” (emphasis added; a broad recitation) having a central open area, said shaft being mounted longitudinally across said frame with said cleaning elements disposed at said open area, and said cleaning elements and said shaft

comprising a roller wherein said cleaning elements extend continuously across a major portion of the length of said shaft. Note, the **ring-like** head frame b as shown in Fig. 1 of Lazarus is deemed to meet the broader recitation “**in the form** of an open frame ring” (emphasis added).

As for claim 33, said shaft is in the form of “a bent wire”, and said cleaning elements c are fiber bristles extending through said wire.

As for claim 38, said cleaning elements c are deemed fiber bristles.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarus in view of Lieux 1,860,894 (hereinafter Lieux).

The patent to Lazarus discloses all of the recited subject matter as set forth above with the exception of said cleaning elements being arranged along the length of said wire in a non-uniform density. The patent to Lieux discloses an arrangement wherein cleaning elements 17 are arranged along the length of a wire 18 in a non-uniform density. It would have been obvious to one of ordinary skill in the art to have modified Lazarus' cleaning elements such that they arranged along the length of a wire

in a non-uniform density as suggested by Lieux for the purpose of varying and improving the cleaning effect on a user's teeth during brushing.

6. Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarus in view of DE 299 12 009 (hereinafter Schindler '009).

The patent to Lazarus discloses all of the recited subject matter as set forth above with the exception of the toothbrush being a power toothbrush and the shaft being power driven. The Schindler '009 reference teaches a toothbrush which is a power toothbrush with its shaft being power driven. It would have been obvious to one of ordinary skill in the art to have modified the Lazarus manual toothbrush such that it is a power toothbrush with its shaft being power driven as taught by Schindler '009 in order to automate operation and/or improve brushing efficiency and speed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Brothers, Johnson, Li, and Wong are pertinent to various brushes with ring or ring-like head arrangements.

8. Applicant's arguments with respect to claims 1, 4-7, 23, 30-33, 35 and 38 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments based upon Lazarus are deemed adequately addressed in the above art rejections for claims 1 and 32. Applicant should also take note of the various cited patents which disclose brushes with ring or ring-like head arrangements.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randall Chin whose telephone number is (571) 272-1270. The examiner can normally be reached on Monday through Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randall Chin/
Primary Examiner, Art Unit 3723